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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,099	12/17/2001	Nicholas R. Arnot	102179-200	5367

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WIGGIN & DANA LLP  
ATTENTION: PATENT DOCKETING  
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EXAMINER

HWU, DAVIS D

ART UNIT PAPER NUMBER

3752

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/024,099

Applicant(s)

ARNOT, NICHOLAS R. *he*

Examiner

Davis Hwu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 2-6 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

1. Applicant's election with traverse of claims 1-13 in Paper No. 4 is acknowledged.

The traversal is on the ground(s) that the examiner would not be unduly burdened evaluating all claims at the same time. This is not found persuasive because the apparatus does not claim a dip tube in the bottle.

The requirement is still deemed proper and is therefore made FINAL.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billiard et al. in view of Redfield.

The patent to Billiard et al. discloses a fire extinguisher comprising:

- a bottle 24 having an interior and at least an outlet;
- a fire suppressant contained by the bottle when the extinguisher is in a pre-discharge condition; and
- a gas generant and discharge assembly extending through the bottle outlet and secured there to and comprising a source of gas as recited (Column 11, line 11) including an ignition chord 67 having a sheath 45 and a pyrotechnic charge 65 contained within the sheath and extending from a proximal end to a distal end, a tube 41 surrounding the sheath at least along a major portion of

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a length thereof and extending from a proximal end to a distal end, a gas generant charge 63 contained between the tube and sheath, a means for igniting the ignition chord, and an outlet 27 through which the suppressant is discharged as recited.

Billiard et al. do not disclose the tube being flexible. The patent to Redfield teaches flexible connector tubes in which the flex capability is provided to compensate for pressure variations. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Billiard et al. by replacing the tube 41 with a flexible tube as taught by Redfield to compensate for various pressure variations in the apparatus. Billiard also discloses the suppressant consisting of heptafluoropropane. The total mass as recited in claims 7 and 8 would have been an obvious matters of design choice depending on the conditions in which this apparatus is to be employed. Regarding claims 9-11, it would have been an obvious matter of design choice to have made the diameter and lengths as recited, since such a modification would have involved a mere change in the size and length of a component which is generally recognized as being within the level of ordinary skill in the art.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Billiard et al. in view of Redfield as applied to claim 1 above, and further in view of Degginger et al.

The patent to Degginger et al. teaches a particularly superior fire suppressant comprising a fluorocarbon. It would have been obvious to one having ordinary skill in

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the art at the time the invention was made to have modified the device of Billiard et al. and Redfield by using at least one fluorocarbon for the suppressant as taught by Degginger et al. to provide a superior fire suppressant.

***Allowable Subject Matter***

5. Claims 2-6 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis Hwu whose telephone number is 703-305-1663. The examiner can normally be reached on M-F 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Y. Mar can be reached on (703)308-2087. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.



Davis Hwu